

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC. 20554**

In the Matter of

Accelerating Wireless Broadband
Deployment by Removing Barriers to
Infrastructure Investment

WT Docket No. 17-79
WT Docket No. 17-38
WC Docket No. 17-84

WTB Seeks Comment On Revising The
Historic Preservation Review Process for
Small Facility Deployments

WT Docket No. 15-180

**JOINT COMMENTS OF EMF SAFETY NETWORK
AND ECOLOGICAL OPTIONS NETWORK**

EMF Safety Network (EMFSN)¹ and Ecological Options Network (EON)² appreciate this chance to participate in the above captioned Federal Communications Commission (FCC) proceedings, which seek comments on removing barriers and revising historic preservation protections for accelerating wireless radiation deployment across America.

¹ EMF Safety Network (EMFSN) was founded in 2009, and is a coalition of business and property owners, and utility customers. Our mission is to educate and empower people by providing science and solutions to reduce EMFs, achieve public policy change, and obtain environmental justice. We have participated in formal proceedings on utility smart meters at the California Public Utilities Commission since 2010. EMFSN website: www.emfsafetynetwork.org

² Ecological Options Network was founded in 2003, is a 501 (c) (3) organization that networks with utility customers and organizations to empower policy protecting health, environment and consumer rights. EON website: <http://www.eon3.net/>

The FCC seeks comment on how to “*reduce the regulatory impediments to wireless network infrastructure investment and deployment*”. EMF Safety Network (EMFSN) and Ecological Options Network, (EON) strongly oppose attempts to expedite increased saturation of our public commons and private spaces with wireless electromagnetic radiation (RFR). Peer reviewed, published science shows RFR poses serious health and safety risks to the public, nature, and children are more vulnerable.

Independent scientists citing peer reviewed published science are calling for immediate measures to reduce RFR from the many common devices in our everyday lives: such as cell phones, cell towers, cordless phones, smart meters, wi-fi routers and computers, etc. The Internet of Things and Smart Communities is the new flavor of the day for government, industry, and academia who see this meme as a data cash cow. This desire for rapid deployment of antennas for more smart uselessness has serious unaddressed health and environmental consequences.

The FCC has not completed proceedings 13-84 and 03-137 and has not updated its RFR safety guidelines since 1996. Industry, local and state jurisdictions cite FCC guidelines as proof of safety, even though those guidelines are outdated and not based in current science. Furthermore FCC oversight to ensure compliance with FCC RFR emissions guidelines is absent.

1. Peer reviewed published independent science shows RFR harm to public health.

- The National Toxicology Program published a 25 million dollar study which is one of the largest and most comprehensive studies on cell phone radiation and cancer. In the study the rats exposed to RFR developed two types of cancers, glioma, a brain tumor, and schwannoma, a tumor in the heart. The summary includes, “*Given the widespread global usage of mobile communications among users of all ages, even a very small increase in the incidence of disease resulting*

*from exposure to RFR could have broad implications for public health.”*³

- The BioInitiative Report updated in 2012, prepared by 29 authors from ten countries, reviewed 2000 studies and conclude, *“EMF and RFR are preventable toxic exposures. We have the knowledge and means to save global populations from multi-generational adverse health consequences by reducing both ELF and RFR exposures. Proactive and immediate measures to reduce unnecessary EMF exposures will lower disease burden and rates of premature death.”*⁴

- 224 peer reviewed published scientists have signed the International EMF Scientist Appeal which calls for protection from RFR exposure: *“We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include—but are not limited to—radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF).* The scientific basis for their concerns are, *“Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal*

³ <http://ntp.niehs.nih.gov/results/areas/cellphones/index.html>

⁴ www.bioinitiative.org

life.”⁵

- In 2011, RFR was classified as a possible (2b) carcinogen by the International Agency for Research on Cancer at the World Health Organization.⁶

- Why children absorb more microwave radiation than adults: “Children absorb more MWR than adults because their brain tissues are more absorbent, their skulls are thinner and their relative size is smaller.”⁷

- An analysis of studies on millimeter waves (MMWs) “State of knowledge on biological effects at 40–60 GHz”⁸ states, “*At the cellular level, it stands out from the literature that skin nerve endings are probably the main targets of MMWs and the possible starting point of numerous biological effects.*” Effects reviewed include effects on capillaries and nerve endings, protein insults, epigenetic regulation, and the risk of homeostasis disruption, which would have dramatic consequences.

2. Peer reviewed published independent science shows RFR harm to nature.

- The US Department of the Interior states wireless radiation threatens birds, and they criticize the FCC’s radiation safety guidelines stating, “*the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today.*” Two hundred forty one bird species are at mortality risk from both tower collisions and from exposure to the radiation towers emit. This includes birds that are endangered or threatened, Birds of Conservation Concern, mi-

⁵ <https://www.emfscientist.org/>

⁶ http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf

⁷ <http://www.sciencedirect.com/science/article/pii/S2213879X14000583>

⁸ C. R. Physique 14 (2013) 402–411 <http://www.sciencedirect.com/science/article/pii/S1631070513000480>

gratory birds, and eagles. Studies of radiation impacts on wild birds documented nest abandonment, plumage deterioration and death. Birds studied included House Sparrows, White Storks, Collared Doves, and other species. Studies in laboratories of chick embryos documented heart attacks and death.⁹

- Scientists in Germany studied tree damage in relation to RFR from 2006-2015. They monitored, observed and photographed unusual or unexplainable tree damage, and measured the radiation the trees were exposed to. *“The aim of this study was to verify whether there is a connection between unusual (generally unilateral) tree damage and radiofrequency exposure.”* They found significant differences between the damaged side of a tree facing a phone mast and the opposite side, as well as differences between the exposed side of damaged trees and all other groups of trees in both sides. They found no tree damage in low radiation areas. The scientists concluded, *“Statistical analysis demonstrated that electromagnetic radiation from mobile phone masts is harmful for trees.”*¹⁰

- Studies show insects are harmed by radiation: Food collection and response to pheromones in an ant species exposed to electromagnetic radiation found exposure to radiation caused colony deterioration and affected social insects’ behavior and physiology.¹¹ Oxidative and genotoxic effects of 900 MHz electromagnetic fields in the earthworm concluded radiation caused genotoxic effects and DNA damage in earthworms¹².

- Mobile Phone Induced Honey Bee Worker Piping. The study abstract states, *“The worldwide maintenance of the honeybee has major ecological, econom-*

⁹ Dept of Interior letter and background: http://www.ntia.doc.gov/files/ntia/us_doi_comments.pdf

¹⁰ <https://www.ncbi.nlm.nih.gov/pubmed/27552133?dopt=Abstract#>

¹¹ <https://www.ncbi.nlm.nih.gov/pubmed/23320633>

¹² <https://www.ncbi.nlm.nih.gov/pubmed/?term=23352129>

ic, and political implications.” Cell phone RFR was tested for potential effects on honeybee behavior. Handsets were placed in the close vicinity of honeybees and the sound made by the bees was recorded and analyzed. The information revealed that active cell phone handsets induced the bees worker piping signal. “In natural conditions, worker piping either announces the swarming process of the bee colony or is a signal of a disturbed bee colony.”

3. The FCC is not protecting public health, safety or the environment

On October 30, 2013 EMF Safety Network submitted comments on FCC proceedings 13-84 and 03-137 which remain incomplete by the FCC. The FCC has not updated its wireless exposure guidelines since 1996. Meanwhile there has been an explosion of wireless devices in homes across America, and forced deployment of radiation on the general population. For example: cell towers, cell and cordless phones, wi-fi, wireless computers and printers, ipads in schools, smart meters, and smart grid. This rampant wireless explosion is set to get much worse with 5G millimeter wave deployment, Internet of Things, Smart Cities, and radar in all new cars.

The federal government has taken sole responsibility for the radiation safety of personal wireless service deployment,¹³ however, no federal agency is acting responsibly, or taking accountability for protecting the public and the environment from the health effects of radiation exposure.

Any United States government agency, especially one who can sell the airwaves should be responsible for the safety and welfare of people and the environment, not abet the industry to fast track towers in neighborhoods to avoid a public backlash. EMFSN and EON oppose the collusion between the wireless industry and the FCC which constitutes regulatory capture.

The FCC is strongly criticized by investigative journalist Norm Alster in a report pub-

¹³ 47 U.S.C. § 332(c)(7); 47 C.F.R. 1.1307(b) and 1.1310, which are based on perceived harm of overheating of human tissues by RF radiation.

lished by Harvard University. Captured agency: How the Federal Communications Commission is dominated by the industries it presumably regulates.¹⁴ Alster calls on the FCC to acknowledge there may be wireless health risks, to back off wi-fi promotion, to acknowledge children and pregnant women may be more vulnerable and more. He writes, *"Personally, I don't believe that just because something can be done it should heedlessly be allowed. Murder, rape and Ponzi schemes are all doable but subject to prohibition and regulation. Government regulators have the responsibility to examine the consequences of new technologies and act to at least contain some of the worst. Beyond legislators and regulators, public outrage and the courts can also play a role but these can be muffled indefinitely by misinformation and bullying."*

4. The FCC fails to enforce its own RFR safety guidelines.

There is documentation of the lack of FCC regulation enforcement for existing antennas provided by the EMR Policy Institute (EMRPI)¹⁵. EMRPI describes the national lack of RFR FCC safety compliance in 2013. There's been no change announced by the FCC since then. *"Hundreds of wireless industry-operated antenna sites from Maine to California have been tested by and found to be in gross violation -- up to and in excess of 600% -- of the FCC's public exposure limits. These sites include rooftops as well as locations where the general public, including children, can gain access, and where workers are on the job."*

Oversight and enforcement of FCC guidelines would entail the cost of frequent technical measuring to ensure compliance. Skilled RFR technicians and clerical management to record and report data would be needed per every antenna. Multiply this cost by the millions of antennas that telecoms want to site along every street in every city in America, and costs for safety compliance checks would astronomical. Therefore safety compliance

¹⁴ <http://bit.ly/FCCcaptured>

¹⁵ <http://www.marketwired.com/press-release/-1770139.htm>

testing would likely never happen, leaving every American unprotected from the unregulated and exponentially increased RFR emissions.

5. Telecoms’ interests do not outweigh local municipal, county and state jurisdiction

On July 14, 2016 FCC Commissioner Jessica Rosenworcel stated during her approval of 5G millimeter wave deployment, *“By law and tradition we honor local control in this country.”*¹⁶ Streamlining 5G deployment should be denied because it will dishonor and impede local control and deliberately thwart public participation.

The FCC’s strategic goal # 2 Protecting Public Interest Goals states, *“The rights of network users and the responsibilities of network providers form a bond that includes consumer protection, competition, universal service, public safety and national security. The FCC must protect and promote this Network Compact.”* Considering the growing scientific body of evidence of RFR harm the FCC must recognize greater consumer protections are warranted, not less protective and reckless fast tracking deployments.

6. Local municipalities have legitimate and established authority to protect citizens’ constitutional rights.

In response to the forced deployment of smart meters in Sebastopol California, the City passed a law¹⁷ which banned smart meter installation. Their legal citations for their actions included: **A.** The City of Sebastopol (the “City”), through its police powers granted by Article XI of the California Constitution, retains broad discretion to legislate for public purposes and for the general welfare, including but not limited to matters of public health, safety and consumer protection and as a local government, the City of Sebastopol finds they have a legal duty to defend and protect the health and welfare of this community. **B.** In addition, the City retains authority under Article XII, Section 8 of the California

¹⁶ At 19: 27 <https://www.fcc.gov/news-events/events/2016/07/july-2016-open-commission-meeting>

¹⁷ <https://goo.gl/49n4Yf>

Constitution to grant franchises for public utilities and pursuant to California Public Utilities Code Section 6203, “may in such a franchise impose such other and additional terms and conditions..., whether governmental or contractual in character, as in the judgment of the legislative body are to the public interest.” C. Further, Public Utilities Code Section 2902 reserves the City’s right to supervise and regulate public utilities in matters affecting the health, convenience and safety of the general public, “such as the use and repair of public streets by any public utility, the location of the poles, wires, mains, or conduits of any public utility, on, under, or above any public streets, and the speed of common carriers operating within the limits of the municipal corporation.”

7. “All Americans” do not want more involuntary exposure to wireless radiation.

Mobilitie’s Petition for Declaratory Ruling¹⁸ *Promoting Broadband for All Americans by Prohibiting Excessive Charges for Access to Public Rights of Way*, (Petition) dated November 15, 2016 makes an enormous and egregious assumption about “all Americans.” Contrary to Mobilitie’s assumptions, not all Americans want their homes, neighborhoods, towns, and rural country-sides to be polluted with millimeter waves so some people can have faster wireless service.

Mobilitie argues “*Robust deployment of wireless facilities and networks demonstrably serves the public interest...*”(Petition p.2) We strongly disagree. On the contrary, it serves the unbounded profit motive of telecom corporations. What is in the best public interest is to avoid unnecessary EMF exposures. There is a growing movement of educated Americans who are aware of cancer and other health risks associated with wireless radiation technology and are choosing to avoid exposures. One example is in California where 54,000 people opted out of PG&E’s smart meters. Hundreds of thousands more customers have refused, or opted out of smart meters across America. Significant percentages of people, those already sickened, and those trying to avoid being injured, adamantly oppose being involuntarily exposed to more radiation for benefit of telecom-

¹⁸ <http://narc.org/wp-content/uploads/Mobilitie-253-Petition-AS-FILED-c1-c1.pdf>

munications profits.

Mobilitie writes, *“The Commission has found that all consumers require wireless broadband to have true and meaningful access to the Internet.”* (Petition pg.4) If the Commission found this to be true they are wrong, because wireless is not required in order to access the internet and there is a growing population of people who use wired internet and corded connections. True and meaningful access to the internet includes speed and security which is provided by fiber optic and/or wired connections.

8. For the above reasons, we ask the FCC to stop the acceleration of RFR until safer alternatives are established and proceedings 13-84 and 03-137 are finalized.

Respectfully submitted on June 9, 2017 by:

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